

## Message

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**From:** Donovan, Betsy [Donovan.Betsy@epa.gov]  
**Sent:** 6/12/2017 2:55:28 PM  
**To:** Vaughn, Stephanie [Vaughn.Stephanie@epa.gov]; Griffiths, Rachel [griffiths.rachel@epa.gov]; Sivak, Michael [Sivak.Michael@epa.gov]; Fajardo, Juan [Fajardo.Juan@epa.gov]; Clemetson, Michael [Clemetson.Michael@epa.gov]; Jill McKenzie (Jill.McKenzie@dep.nj.gov) [Jill.McKenzie@dep.nj.gov]; Hagerman, Paul [HagermanPR@cdmsmith.com]; Darpinian, Amy F NWK (Amy.F.Darpinian@usace.army.mil) [Amy.F.Darpinian@usace.army.mil]; George Molnar (George\_Molnar@fws.gov) [George\_Molnar@fws.gov]  
**CC:** Carpenter, Angela [Carpenter.Angela@epa.gov]  
**Subject:** FW: Rolling Knolls - proposed RAOs and Remedial Alternatives

Rolling Knolls Reviewers – Please see the following message with the PRPs proposed Remedial Action Objectives (RAOs) and Remedial Alternatives which will be included in the Feasibility Study. Please provide comments by June 26<sup>th</sup>. If you would like to discuss any comments prior to submitting a response, please let me know. Thank you for your assistance.

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**From:** John Persico [mailto:JPersico@Geosyntec.com]  
**Sent:** Monday, June 12, 2017 8:15 AM  
**To:** Donovan, Betsy <Donovan.Betsy@epa.gov>  
**Cc:** Ricci, Richard F. <RRicci@lowenstein.com>; mfaigen@issuesllc.com; Richman-La Londe, Alexa <ALALONDE@RIKER.com>; 'Fisher, Gary (Nokia - US/Murray Hill)' <gary.fisher@nokia.com>; Brian Bergeron <pete.bergeron@chevron.com>; Richard T. Hughes <rhughes@jw.com>; Irvin M. Freilich <IFreilich@gibbonslaw.com>; Jim O'Meara <james.omeara@novartis.com>; Michael Draikiwicz <MDraikiwicz@enviro-sciences.com>; Nancy Eichinger <nancy.eichinger@novartis.com>; Robb Truedinger <robb.truedinger@novartis.com>; Robert A. Malinoski <RMalinoski@chevron.com>; Shawn LaTourette <SLaTourette@gibbonslaw.com>; Sofina Mirza-Reid <sofina.mirza-reid@novartis.com>; Goldfarb, Steven <steven.goldfarb@novartis.com>; Adame Winningham, Nikki <nadame@lowenstein.com>; Steven Poirier <SPoirier@Geosyntec.com>  
**Subject:** Rolling Knolls - proposed RAOs and Remedial Alternatives

Betsy, as I indicated in my email on June 8, 2017, we are providing new proposed Remedial Action Objectives (RAOs) and Remedial Alternatives for review by USEPA. These are based on your comments on the RAOs and Remedial Alternatives in the Development and Screening of Remedial Alternatives Technical Memorandum (DSRA Tech Memo) and on subsequent discussions between USEPA and the Rolling Knolls Group.

### RAOs

1. Prevent or minimize current and potential future unacceptable risks to human and ecological receptors through direct contact or ingestion of contaminated soil.
2. Control source areas to prevent or minimize impacts to groundwater.
3. Prevent or minimize current and potential future unacceptable risks to human receptors through ingestion of contaminated groundwater.
4. Restore groundwater to its expected beneficial use to the extent practicable by reducing contaminant concentrations below the more stringent of federal MCLs and NJ GWQS.

### Remedial Alternatives

#### **Soil (no future use scenario)**

1. No Action
2. Site Controls

3. Site Controls and Capping of Selected Areas to Reduce Overall Risk
4. Site Controls, Consolidation of Selected Materials, and Capping of Selected Areas to Reduce Overall Risk
5. Site Controls, Excavation, and Off-Site Disposal of Selected Areas to Reduce Overall Risk

#### **Soil (residential future use scenario)**

1. Site Controls and Capping of All Landfill Material in the Developable Area of the Site
2. Excavation and Off-Site Disposal of All Landfill Material in the Developable Area of the Site

#### **Groundwater**

1. No Action
2. Monitored Natural Attenuation (MNA) with Source Control
3. Biological Treatment and MNA with Source Control
4. In-Situ Chemical Oxidation and MNA with Source Control
5. Containment Using a Permeable Reactive Wall and MNA with Source Control

Note that by “source control” in the groundwater remedial alternatives, we are referring to the buried materials observed at Test Pit TP-09, upgradient of well MW-3, or similar buried source materials.

Please let me know if you have any questions or want to discuss these.

John L. Persico, P.G.  
Principal  
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